



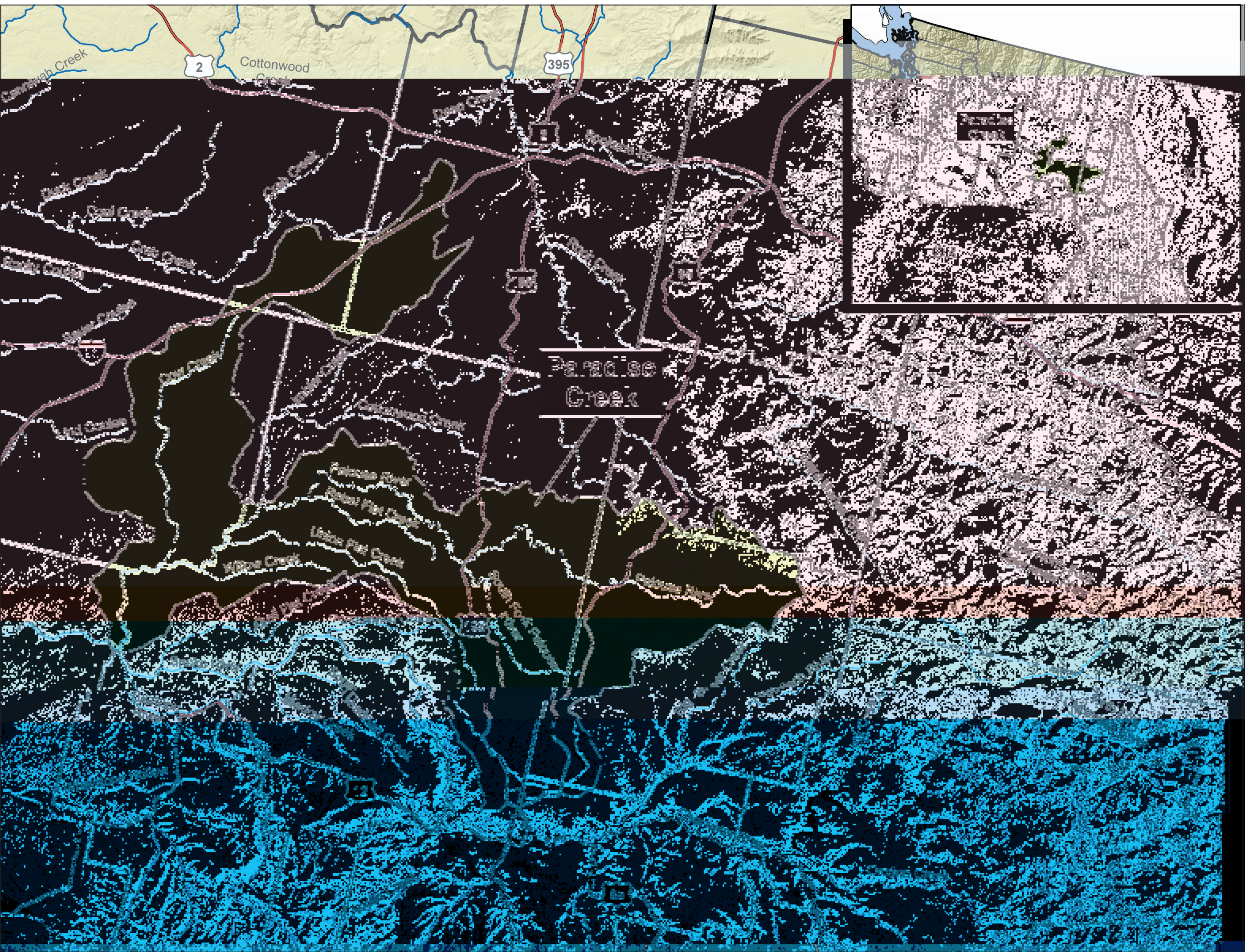
United States Department of Agriculture

# Conservation Effects Assessment Project (CEAP)

*Paradise Creek Watershed, Idaho: 2004-2007*



A CSREES\* Competitive Grant Watershed, one of 24 CEAP watershed projects.



## CEAP Assessment

Apply statistical methods and geospatial modeling to investigate the effectiveness of multiple conservation practices and determine optimal scenarios for watershed restoration based on physical and socio-economic characteristics.

### Watershed Description

- 12,000 acres
- 69.5% crop land, 16% forest, 14.5% urban
- Paradise Creek is an impaired waterbody under the Clean Water Act with an approved Total Maximum Daily Load (TMDL).
- A TMDL had been established for ammonia, total phosphorus, sediment, pathogens, and temperature.
- Watershed is a Clean Water Act Section 319 grant demonstration project.

**Issues:** Soil erosion, sediment transport

\*Cooperative State Research, Education, and Extension Service

## Approach

**Water sampling:** Flow, turbidity, temperature and electrical conductivity (EC), event-based total suspended solids (TSS) sampling, pre-and post-best management practice (BMP) monitoring, water quality monitoring, U.S. Geological Survey daily flows

**Watershed models:** SMR (Soil Moisture Routing), WEPP (Water Erosion Prediction Project), CCHE1D (AGNPS channel network modeling component)

**Assess practices:** Direct seed rotation, water and control structures, buffer strips, stream restoration

## Communicating Results

Three annual reports, scientific meetings, publications.

## Collaborators

- USDA, U.S. Forest Service, Rocky Mountain Research Station
- USDA, Natural Resources Conservation Service
- Latah County Soil and Water Conservation District
- University of Idaho
- Palouse Clearwater Environmental Institute
- Soil Conservation Commission
- Local farmers and operators

## Contacts

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Researchers in the Paradise Creek watershed are trying to clean up the water in the creek by planting forest buffers (background) and a no-till grass buffer strip (lower left) to provide filters for run-off water from the mountains in the background.



A forested buffer strip of small pine trees has been planted in the Paradise Creek watershed to filter run-off water protecting the pond below.



Paradise Creek stream monitoring station.

## Timeline

<b>2003</b> Initial funding	<b>2004</b> <b>August</b> CEAP bibliographies	<b>2005</b> <b>May</b> Wetlands peer review	<b>July</b> Wildlife literature review (program-based)	<b>October</b> Cropland literature reviews Wildlife literature review (practice-based) Wildlife Work Plan	<b>November</b> Wetlands Work Plan	<b>December</b> Draft findings— Prairie Pothole region
<b>2006</b> <b>February</b> Preliminary habitat quality models— Prairie Potholes wetland region	<b>March</b> Preliminary National Assessment Report	<b>2007</b> <b>Fall</b> National Assessment Final Report	<b>2008</b> <b>January</b> CSREES Watershed final reports			